

1. (Amended) A process for the preparation of a vaccine against tuberculosis and other intracellular pathogens selected from the group consisting of *Mycobacterium leprae*, *leishmania*, *salmonella*, *trypanosoma*, *plasmodium*, *brucella*, *listeria*, *HIV*, *streptococcus* and *cancer*, wherein the process comprises the steps of:

- C¹
- A²
- (i) culturing pathogens selected from the group comprising of *Mycobacterium tuberculosis*, *Mycobacterium leprae*, *leishmania*, *salmonella*, *trypanosoma*, *plasmodium*, *brucella*, *listeria*, *HIV* and *streptococcus*;
 - (ii) culturing syngeneic (same strain), allogeneic (different strain) and xenogeneic (different species like sheep and goat) macrophages and macrophage cell lines selected from the group consisting of J774, P388D1, RAW, BMC-2 and THP-1;
 - (iii) infecting macrophages and cell lines with a pathogen;
 - (iv) treating the infected cells with drugs followed by gamma irradiation to obtain the vaccine;
 - (v) immunizing disease resistant and susceptible strains of animals with the vaccine obtained above;
 - (vi) infecting the animals with live pathogen and monitoring their mortality and viable counts of infectious agent in lungs, spleen and liver; and
 - (vii) monitoring the vaccinated animals for proliferation and generation of CD4⁺ Th1 and Th2 cells and CD8⁺ cytotoxic T cells indicating the generation of cell mediated immunity.

2. (Amended) A process for the preparation of a vaccine against tuberculosis, the process comprising the steps of:

- (i) culturing *Mycobacterium tuberculosis* H37Rv;

- (ii) culturing syngeneic and allogeneic macrophages and macrophage cell lines selected from the group consisting of J774, P388D1, RAW, BMC-2 and THP-1;
- (iii) infecting macrophages and cell lines (J774, P388D1, RAW, BMC-2, THP-1) with *M. tuberculosis*;
- (iv) treating the infected cells with isoniazid and gamma irradiation to obtain the vaccine;
- (v) immunizing tuberculosis resistant and susceptible strains of mice with allogeneic macrophage tuberculosis vaccine (AMTV) and syngeneic macrophage tuberculosis vaccine (SMTV) obtained above;
- (vi) infecting the mice with live *M. tuberculosis* and monitoring their mortality and viable counts of bacteria in lungs, spleen and liver;
- (vii) monitoring the vaccinated animals for proliferation and generation of CD4⁺ Th1 and Th2 cells and CD8⁺ cytotoxic T cells indicating the generation of cell mediated immunity; and
- (viii) inoculating the vaccine in the mouse footpad and examining the delayed type hypersensitivity reaction by measuring the swelling in the footpad for protective immunity.

3. (Amended) A process for the preparation of a vaccine against salmonella, the process comprising the steps of:

- (i) culturing *Salmonella typhimurium*;
- (ii) culturing syngeneic and allogeneic macrophages and macrophage cell lines selected from the group consisting of J774, P388D1, RAW, BMC-2 and THP-1;
- (iii) infecting macrophages and cell lines (J774, P388D1, RAW, BMC-2, THP-1) with *S. typhimurium*;

- (iv) treating the infected cells with mitomycin C and gamma irradiation to the obtain vaccine;
- (v) immunizing tuberculosis resistant and susceptible strains of mice with the vaccine obtained above;
- (vi) infecting the mice with live *S. typhimurium* and monitoring their mortality and viable counts of bacteria in lungs, spleen and liver;
- (vii) monitoring the vaccinated animals for proliferation and generation of CD4⁺ Th1 and Th2 cells and CD8⁺ cytotoxic T cells indicating the generation of cell mediated immunity; and
- (viii) inoculating the vaccine in the mouse footpad and examining the delayed type hypersensitivity reaction by measuring the swelling in the footpad for protective immunity.

5. (Amended) A vaccine as prepared by the process of claim 1, wherein by entrapment of *M. tuberculosis*, *Salmonella* and other intracellular pathogens in the allogeneic and syngeneic macrophages, the preparations being treated by the available drugs against the pathogens and the vaccine is further gamma irradiated before using for the protection against the infectious diseases and cancer.

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Please cancel claim 4, without prejudice or disclaimer.

REMARKS

Claims 1-3 and 5 will be pending in the application upon entry of the above amendments. Claim 4 has been cancelled. Claims 1 to 3 have been amended for clarification purposes. Support for the amendments to claims 1 to 3 exists in the specification as filed. The specification has been amended for clarification purposes. No new matter has been added. Favorable reconsideration in light of above amendment and the remarks which follow is respectfully requested.